TOGETHER A GOOD START TO A GREAT FINISH

LALSTIM OSMO SP

BIOSTIMULANT

Protects plant cells from negative environmental stress, improving growth during heat, cold, drought, frost, and salinity. Guards crops against physiological disorders.

SOLUBLE POWDER

OSMOPROTECTANT

newedge|microbials
Growing Better

3 Moloney Drive, Wodonga Vic 3690, Australia. +61 2 6025 0044
Email: newedge@nem.com.au, ABN 93 093 133 530 **www.nem.com.au**

Build your plant's tolerance to environmental stresses. LALSTIM OSMO SP is a **highly soluble powder formulation of Glycine Betaine that provides persistent osmoprotection** so your plants can withstand harsh environmental conditions for several weeks. This water-soluble formulation is compatible with most tank mix inputs and is highly stable.

ADVANTAGES

- Sustains plant performance under abiotic stress conditions.
- Improves water uptake and maintains crop resilience.
- Translocates into the plant within 24-48 hours and persists for several weeks.
- Minimises yield losses caused by fruit injury such as bursting, mottling and cracking.
- Minimises post-harvest fruit decline by preserving stability of cellular osmotic pressure.

CHARACTERISTICS

Active Ingredient

- Highly-concentrated Glycine Betaine 97%,
- Approved for organic production

Package Sizes

2 kg bag

Storage Information

Store sealed in the original packaging in a cool, dry place [<25°C] for up to 36 months.

Always read and follow label instructions.

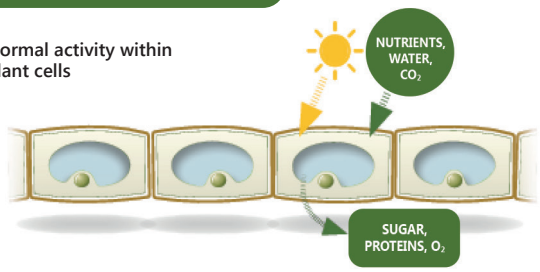
MODES OF ACTION

As an osmoprotectant, LALSTIM OSMO SP facilitates water uptake and retention, and adjusts the osmotic balance in plant cells and tissues. This allows for improved photosynthesis, nitrogen metabolism and nutrient translocation during adverse environmental conditions such as heat, cold, drought, and high salinity.

LALSTIM OSMO SP maintains normal functioning and structure of plants exposed to abiotic stress

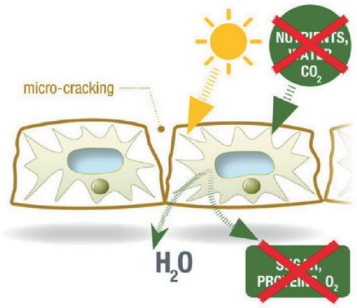
Normal conditions

Normal activity within plant cells



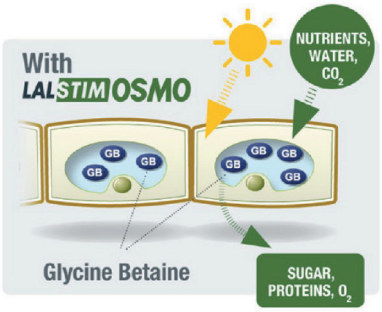
Exposed to abiotic stress

Cell metabolism stops, microfissures appear and cell contents are lost particularly water



Exposed to abiotic stress, treated with LALSTIM OSMO SP

Cell metabolism is maintained and the physical integrity of plant tissue is preserved



RECOMMENDED CROPS

- Greenhouse Fruit & Vegetables
- Field-Grown Fruit & Vegetables
- Ornamentals
- Stone and Pome Fruit Trees

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APPLICATION RATES

LALSTIM OSMO SP

CROP	APPLICATION RATE (kg/ha)	APPLICATION VOLUME (L/ha)	TARGET AND TIMING OF APPLICATION(S)
Seedlings	1 – 2	400 – 1000	**Frost, drought, heat and salinity stress:** Spray 1-2 times every 2-3 weeks from transplanting.
Leaf Vegetables (e.g. lettuce)	2	400 – 800	**Frost, drought and heat stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Calcium imbalance from abiotic stress:** Spray at 3–4 leaf stage and repeat 3 weeks later.
Fruiting Vegetables (e.g. tomato)	2	200 - 1000	**Frost, drought and heat stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Tolerance to abiotic stress during flowering:** Early flowering. **Calcium imbalance from abiotic stress:** Spray at least 24 hours before stress occurs (e.g., heat stress) and repeat 3 weeks later. **Reduce cracking from abiotic stress:** Begin spraying at start of color development in fruit and repeat every 1–4 weeks through ripening
Potato	2	200 - 500	**Frost, drought and heat stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Abiotic stress tolerance:** At the tuber initiation.
Grapevines	2	200 – 1000	**Frost, drought and heat stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Tolerance to abiotic stress during flowering:** Early flowering. **Reduce cracking from abiotic stress:** 1st application at bunches closing (BBCH 77), 2nd application beginning of ripening (BBCH 81).
Fruit and Nut trees (e.g. apples, pears, apricots, peaches, citrus, almonds)	4 – 7	400 - 1000	**Frost, drought, heat and salinity stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Tolerance to abiotic stress during flowering:** Early flowering or at the latest 24h before the risk of frost.
	4 – 5	400 - 1000	**Reduce cracking from abiotic stress:** At early color development of the fruits and repeated 4 weeks before harvesting.
Cherry	4 – 7	400 - 1000	**Frost, drought, heat and salinity stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Tolerance to abiotic stress during flowering:** During early flowering or at the latest 24h before the risk of frost.
	2 – 4	400 - 1000	**Reduce cracking from abiotic stress:** Two applications: 2 kg applied at beginning of colour change from green to yellow and 2 kg applied again 7 to 10 days later; OR one application: 4 kg/ha at start of colouring.
Berries (e.g. strawberry, raspberry, blueberry)	1 – 2	400 – 1000	**Frost, drought, heat and salinity stress:** Spray 1-2 times every 2-3 weeks during stress conditions. **Tolerance to abiotic stress during flowering:** Early flowering or at the latest 24h before the risk of frost. **Reduce cracking from abiotic stress:** At early color development of the fruits and repeated 4 weeks before harvesting.

Apply as a foliar spray to point of wetness. A compatible non-ionic adjuvant may be added to the spray suspension according to manufacturer's instructions to optimise coverage on plant surfaces and penetration into plant tissue. Compatible with pesticides and foliar fertilisers. It is best to check compatibility first using a jar test or by consulting New Edge Microbials [NEM] customer support team.

Timing varies by crop. Apply when relative humidity is high [e.g. evening or early morning] to allow the tissue to stay wet longer and ensure better uptake of LALSTIM OSMO SP in the plant. Repeat every 3-4 weeks.

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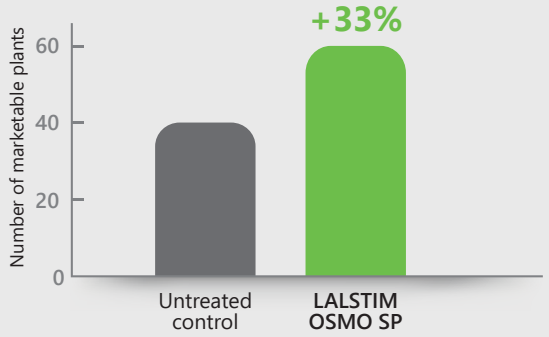
LALSTIM OSMO SP

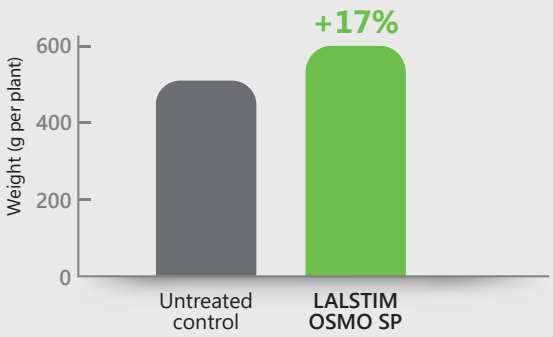
LETTUCE:

For iceberg lettuce, two applications of 2 kg/ha of LALSTIM OSMO SP at rosette stage and 3 weeks later reduced tip burn, increasing the marketable yield by +33%. For the marketable iceberg lettuce, the two applications of LALSTIM OSMO SP increased plant weight by +17%.

LALSTIM OSMO SP reduced tip-burn in iceberg lettuce, increasing the number of marketable plants by +33%



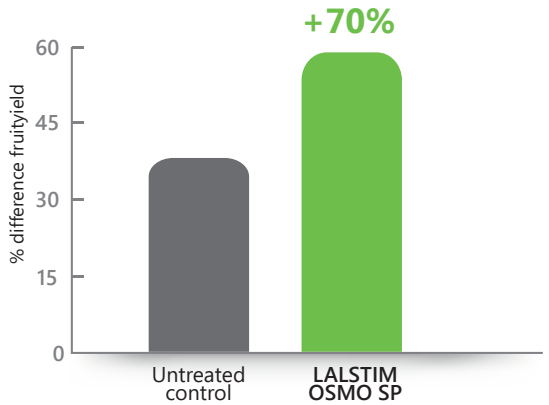
LALSTIM OSMO SP increased the weight of Iceburg lettuces by +17%, representing an increase yield of 84g per plant



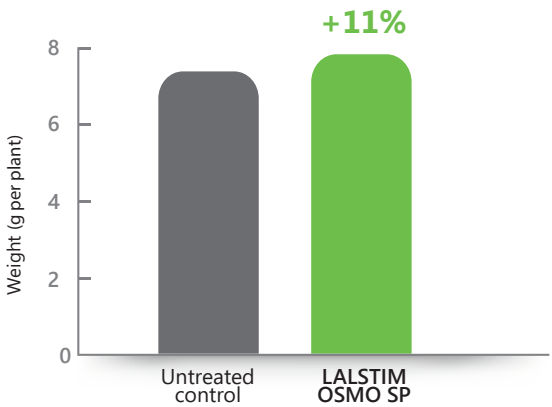
TOMATOES:

For tomatoes, applications of 6 g per L of LALSTIM OSMO SP from time of transplanting seedlings and 3 weeks later, reduced blossom-end rot, increasing the marketable yield by +70%. For the marketable tomatoes harvested, LALSTIM OSMO SP increased the fruit weight by +11%.

LALSTIM OSMO SP reduced blossom-end rot in tomatoes, increasing the fruit yield by +70%



LALSTIM OSMO SP increased the weight of tomato yield by +11%



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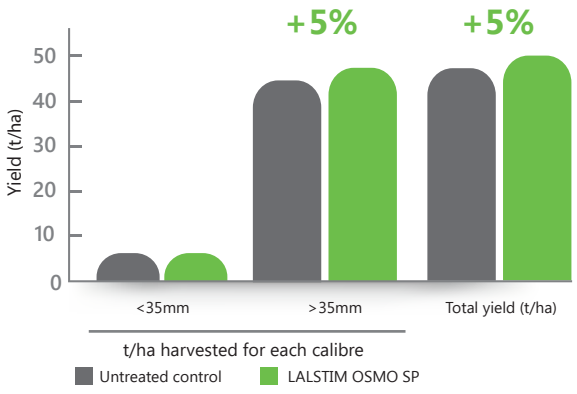
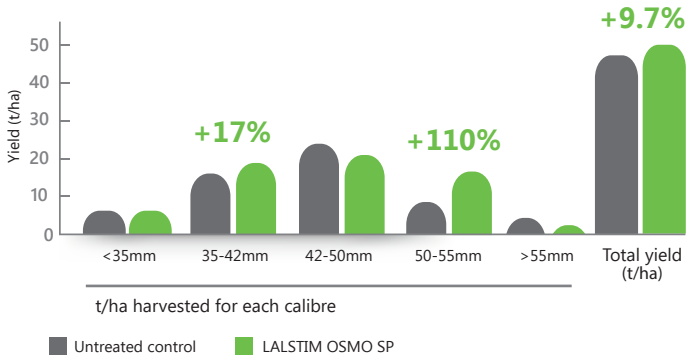
POTATOES:

For Bintje and Table potatoes, two applications of 1 kg/ha of LALSTIM OSMO SP at hook stage and 2 weeks after the first application increased the consistency of potato tuber calibre harvested and the total yield by +5% and +9.7%.

LALSTIM OSMO SP increased the consistancy in yield of larger calibre Bintje tubers and total yield by +5%.



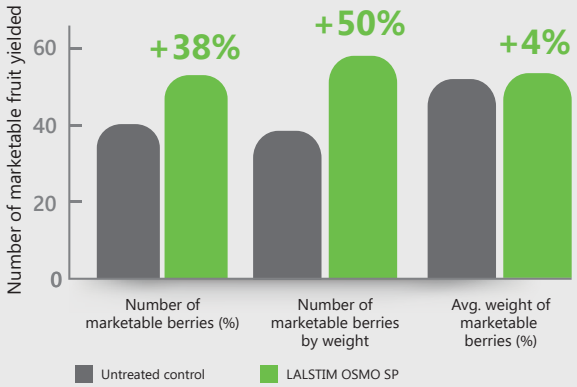
LALSTIM OSMO SP increased the consistancy of calibre and yield of Table potatoes by +9.7%.



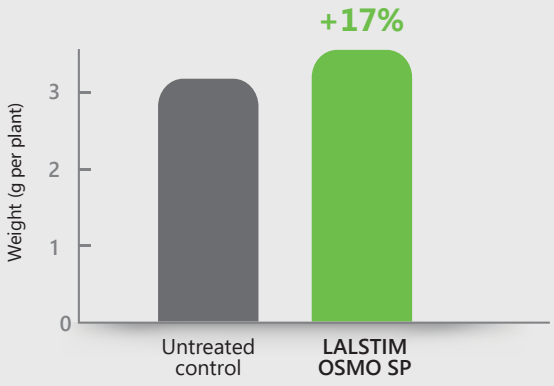
GRAPES:

Grape vines: For Table grapes, application of 2 kg/ha of LALSTIM OSMO SP at beginning of ripening, reduced cracking of berries, increasing the harvested marketable berries yielded by +38-50% and increased the average marketable berry weight by +4%. Application of LALSTIM OSMO SP increased healthy marketable berry weight by +17%.

LALSTIM OSMO SP reduced the average number and average weight of cracked grapes, increasing the number of marketable berries by +38-50%



LALSTIM OSMO SP increased the weight of grapes by +17%.



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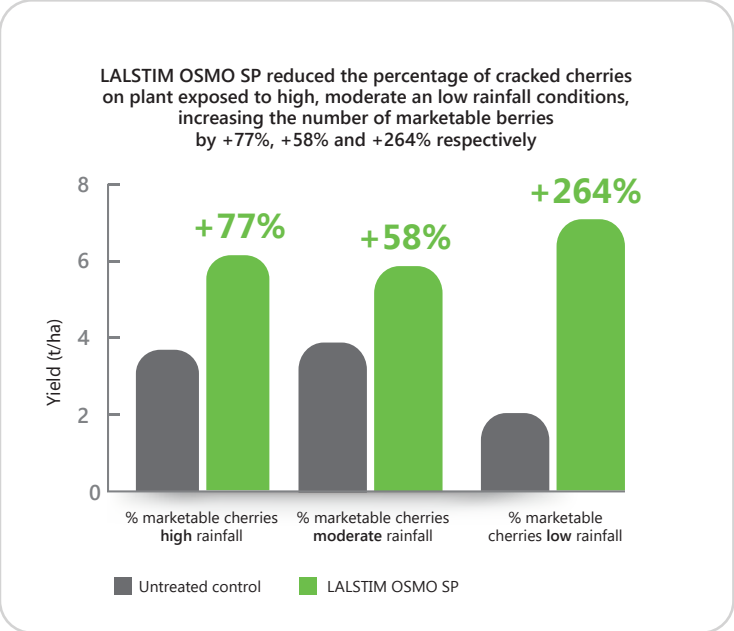
CHERRIES:

Application of 4 kg/ha of LALSTIM OSMO SP at the beginning of colour change for cherries grown under high, moderate and low rainfall conditions reduced cracking in all three scenarios, increasing marketable yields by +77%, +58% and +264% respectively.



LALLEMAND

About Lallemand Plant Care

For over 100 years, Lallemand has been an expert in yeast and bacteria manufacturing. It is now a global leader in the development, production, and marketing of microorganisms for various industries. Using sound science and know-how, Lallemand Plant Care provides effective microbial-based solutions that deliver agronomic, economic, and sustainable value to growers.

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